

“PGM Market Report May 2023”

A return to more balanced conditions is expected

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NON-PEER REVIEWED FEATURE

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Johnson Matthey’s annual review of the platinum group metal (pgm) markets was published on 15th May 2023, providing an outlook for pgm supply and demand for 2023. The report contains a comprehensive review of developments in the automotive market, covering production and powertrain trends and their implications for pgm use as well as an update on future emissions legislation. It also features an in-depth discussion of the ruthenium and iridium markets in view of increasing interest in the use of these metals in the net zero transition.

Prices and Supplies

The first quarter of 2023 saw steep falls in palladium and rhodium prices (**Figure 1**). After a series of liquidity squeezes between 2019 and 2022, both markets are now returning to more normal conditions, with rhodium in a small surplus and the palladium market close to balance. In contrast, platinum is forecast to shift into a small deficit in 2023 due to greater adoption of trimetal catalysts on gasoline vehicles and robust industrial demand.

Johnson Matthey’s forecasts for all three metals show an increase in primary pgm supplies in 2023 in line with improved smelter availability in South Africa and some incremental growth at mines currently implementing expansion programmes.

Although Russian pgm output could fall, Norilsk Nickel is expected to maintain supplies by mobilising stocks of refined pgm that were not sold in 2022.

Secondary supplies should also grow modestly in line with a gradual recovery in new vehicle registrations. However, there is some downside risk to the estimates if falling palladium and rhodium prices cause scrap collectors to ‘hoard’ spent catalytic converters in the hope that their value will increase in future. Scrap flows in China fell sharply during the first quarter of 2023 due to an increase in hoarding, but activity is expected to normalise once the market adjusts to lower price levels.

Demand

Demand for pgms is forecast to remain relatively robust, especially for platinum which could see double-digit gains. Automotive platinum consumption should enjoy another year of strong growth, mainly due to ongoing platinum-for-palladium substitution on gasoline autocatalysts. However, rhodium use will be flat while palladium automotive demand will fall slightly, leaving total pgm consumption on vehicles only slightly higher than in 2022. While several large automotive markets will enforce tighter emissions legislation in 2023, autocatalyst pgm loadings are forecast to rise only modestly.

On the industrial front, demand in the chemicals sector is expected to remain buoyant for at least another year but a downturn in the electronics industry is currently affecting pgm use in electronic components, hard disks and display glass. Johnson Matthey’s forecasts reflect industry expectations of a recovery in the electronics sector during the second half of 2023; if this does not materialise, there could be some downside



Fig. 1. Platinum, palladium and rhodium prices

to the reported demand numbers. More broadly, the outlook for major world economies remains clouded by high inflation, elevated interest rates and increased geopolitical instability, escalating the risk that planned capacity expansions in the glass, chemical and petroleum sectors could be delayed or cancelled.

Jewellery demand, primarily for platinum, is forecast to be broadly stable in 2023. There are signs that the Chinese market could be bottoming out, but manufacturers in this region remain pessimistic about the outlook for platinum jewellery and have redeployed equipment and workers. This means there is little prospect of any material increase in Chinese jewellery demand in 2023 but there should be some growth in the US and Indian markets.

Johnson Matthey’s forecast allows for positive investment demand for both platinum and

palladium in 2023. During the first quarter of 2023, platinum benefited from a fall in yen-denominated prices which triggered renewed buying of large bars in Japan. There was also significant buying of platinum exchange traded funds (ETFs) in South Africa, where electricity shortages (and the resulting risk to mine production) encouraged a rotation out of mining equities and into underlying commodities. Palladium also saw some modest ETF buying, perhaps reflecting recent falls in the price which have created a more attractive entry point.

The ‘minor pgms’, ruthenium and iridium, are forecast to see strong growth in demand in 2023 with increased use of ruthenium in chemical catalysts (Figure 2) and growing consumption of iridium in a variety of electrochemical processes (Figure 3). Following a period of market tightness, availability is currently adequate to meet consumer

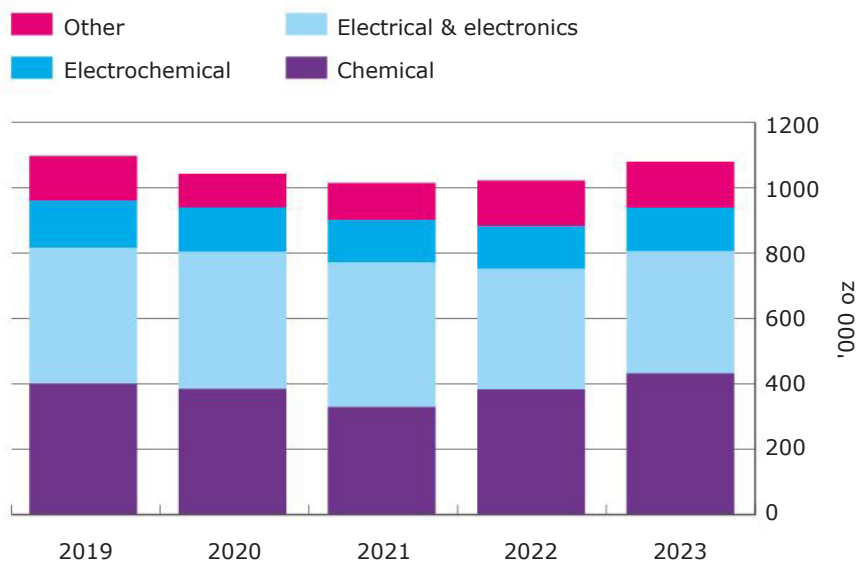


Fig. 2. Industrial demand for ruthenium

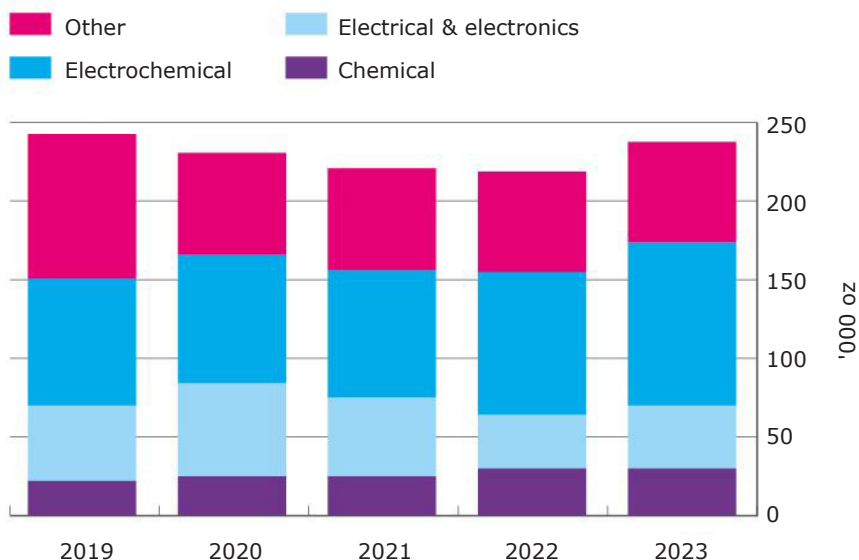


Fig. 3. Industrial demand for iridium

demand. Higher prices are stimulating efforts to minimise metal consumption *via* higher efficiencies and improved recoveries from in-process scrap. There has also been some substitution of iridium with platinum in crucibles used to grow electronic crystals.

Summary

Overall, a return to more balanced conditions in the pgm markets is expected during 2023. While

the figures show the platinum market in a small deficit, there are ample market stocks available to meet consumer demand. For palladium and rhodium, the risk of renewed liquidity crises has receded in view of the subdued outlook for gasoline vehicle production, along with platinum-for-palladium substitution in autocatalysts and technical developments which released significant quantities of rhodium from the fibreglass industry during 2021–2022.

The Author



Alison Cowley has worked in Johnson Matthey's Market Research department since 1990 and currently holds the post of Principal Analyst. She is Johnson Matthey's specialist on mining and supplies of the platinum group metals (pgms) and the author of the annual "PGM Market Report".